



# United States Patent [19]

Toyoshima et al.

[11] Patent Number: 4,816,484

[45] Date of Patent: Mar. 28, 1989

[54] HYPOGLYCEMIC AGENT

[75] Inventors: Shigeshi Toyoshima; Yoshiko Seto,  
both of Funabashi; Hisashi Shinkai,  
Kawasaki; Koji Toi, Kanagawa;  
Izumi Kumashiro, Yokohama, all of  
Japan *SPY*

[73] Assignee: Ajinomoto Co., Inc., Tokyo, Japan

[21] Appl. No.: 146,719

[22] Filed: Jan. 21, 1988

## Related U.S. Application Data

[62] Division of Ser. No. 844,970, Mar. 27, 1986. abandoned.

## [30] Foreign Application Priority Data

Mar. 27, 1985 [JP] Japan ..... 60-62276

[51] Int. Cl.<sup>4</sup> ..... A61K 31/215; C07C 101/72

[52] U.S. Cl. .... 514/563; 514/529;  
514/530; 549/304; 549/467; 562/445; 562/450;  
560/40; 560/41; 546/169; 546/323

[58] Field of Search ..... 514/563, 613; 562/445;  
560/40

## [56] References Cited

### U.S. PATENT DOCUMENTS

4,670,584 6/1987 Toyoshima et al. .... 562/445

### FOREIGN PATENT DOCUMENTS

93551 9/1983 European Pat. Off. .  
2102412 2/1983 United Kingdom .

### OTHER PUBLICATIONS

Toyoshima et al., "Preparation of D-Phenylalanine Derivatives and Their Use as Hypoglycemic Agents", CA 106 85057d (1987).

European Search Report/Application No. 86 30 2217/26-11-1987.

10-635-0 REISSUE

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

IN RE APPLICATION OF:

SHIGESHI TOYOSHIMA ET AL

U.S. PATENT NO.: 4,816,484

PATENTED: MARCH 28, 1989

SERIAL NO.: 07/146,719

FILED: JANUARY 21, 1988

FOR: HYPOGLYCEMIC AGENT

SUBSTITUTE DECLARATION

HONORABLE COMMISSIONER OF PATENTS & TRADEMARKS  
WASHINGTON, D.C. 20231

SIR:

I, the undersigned representative of Ajinomoto Co., Inc., of No. 15-1 Kyobashi 1 chome, Chuo-ku, Tokyo, 104, Japan, certify that I am an individual empowered to act on behalf of petitioner, Ajinomoto Co., Inc., 15-1 Kyobashi 1-chome, Chuo-ku Tokyo, 104, Japan, the assignee of the entire right, title and interest of the above-captioned application by virtue of an assignment from the inventors of said application.

I further certify that the Assignment has been recorded in the U.S. Patent and Trademark Office at reel no. 4982, frames 100 and 101, that I have reviewed the Assignment recorded at said reel and frame, and that to the best of my knowledge and belief, title is in the above-noted assignee.

I further do hereby declare and state that:

1. U.S. Patent No. 4,816,484 is wholly or partly inoperative, by reason of the patentee claiming less than he had the right to claim in the patent (37 C.F.R. §§ 1.175(a)(1))

and (a)(3)). Specifically, U.S. Patent No. 4,816,484 does not contain a claim limited to the compound N-(trans-4-isopropylcyclohexylcarbonyl)-D-phenylalanine (37 C.F.R. § 1.175(A)(3)).

2. It is the fact that U.S. Patent No. 4,816,484 does not contain a claim limited N-(trans-4-isopropylcyclohexylcarbonyl)-D-phenylalanine which is the error being relied upon for this reissue application (37 C.F.R. 1.175(a)(5)).

Specifically, in the reissue application being filed herewith, the error is being corrected by making the following corrections:

Claim 16, which reads as follows:

--16. The compound N-(trans-4-isopropylcyclohexylcarbonyl)-D-phenylalanine.--  
is being added.

After this correction is made, the claims of the reissue application will include a claim limited to N-(trans-4-isopropylcyclohexylcarbonyl)-D-phenylalanine.

3. The error relied upon for this reissue application occurred as follows. On June 16, 1988, Examiner Owens issued a telephone requirement for the election of a single disclosed species. On June 16, 1993, Applicants' representative, Jean-Paul Lavalleye, Reg. No. 31,451, elected N-(trans-4-isopropylcyclohexylcarbonyl)-D-phenylalanine as the species for examination. Applicants should have added a claim limited to the elected species, in response to the next written Official Action which would have referred to the telephone

election. On July 22, 1988, Examiner Owens contacted Applicants' representative and indicated that she would allow the case if Applicants agreed to amend the claims by Examiner's Amendment. On August 1, 1988, Applicants' representative, Stephen G. Baxter, Reg. No. 32,884, informed Examiner Owens that Applicants agreed to the Examiner's Amendment. Thus, there was no written Official Action which referred to the telephone election and a claim limited to the elected species was not added. This error was discovered during the course of licensing negotiations in July and August of 1993.

4. The error complained of herein clearly occurred without any deceptive intention (37 C.F.R. § 1.175(a)(6)).

5. Applicant is aware of its duty to disclose to the Patent Office all information known to the Applicant to be material to patentability as defined in 37 C.F.R. § 1.56 (37 C.F.R. § 1.175(a)(7)).

6. Applicant hereby claims foreign priority benefits under Section 119 of Title 35, United States Code, of Japanese Patent Application 60-62276, filed March 27, 1985. There are no foreign applications or applications for Inventor's Certificate having an earlier filing date.

7. Applicant verily believes that the named inventors on U.S. Patent 4,816,484 are the original and first inventors of the subject matter claimed in the attached application.

8. Applicant has reviewed and understands the contents of the specification of the attached application, including

the claims, as amended by any amendment specifically referred to in this Declaration.

21 9. Applicant hereby appoints: Norman F. Oblon, Reg. No. 24,618; Marvin J. Spivak, Reg. No. 24,913; C. Irvin McClelland, Reg. No. 21,124; Gregory J. Maier, Reg. No. 25,599; Arthur I. Neustadt, Reg. No. 24,854; Robert C. Miller, Reg. No. 25,357; Richard D. Kelly, Reg. No. 27,757; James D. Hamilton, Reg. No. 28,421; Eckhard H. Kuesters, Reg. No. 28,870; Robert T. Pous, Reg. No. 29,099; Charles L. Gholz, Reg. No. 26,395; Vincent J. Sunderdick, Reg. No. 29,004; William E. Beaumont, Reg. No. 30,996; Steven B. Kelber, Reg. No. 30,073; Stuart D. Dwork, Reg. No. 31,103; Robert F. Gnuse, Reg. No. 27,295; Jean-Paul Lavalleye, Reg. No. 31,451; William B. Walker, Reg. No. 22,498; Timothy R. Schwartz, Reg. No. 32,171; Stephen G. Baxter, Reg. No. 32,884, and John H. O. Clarke, Reg. No. 17,373; our attorneys, with full powers of substitution and revocation, to prosecute this application and to transact all business in the Patent Office connected therewith, and we hereby request that all correspondence regarding this application be sent to the firm of OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. whose Post Office Address is: Crystal Square Five, Fourth Floor, 1755 Jefferson Davis Highway, Arlington, Virginia 22202.

10. The present reissue application does not seek to enlarge the scope of the claims of U.S. Patent 4,816,484, and accordingly, this Declaration is being made by the assignee of the entire interest (37 C.F.R. § 1.172(a)).

I declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

FOR: Ajinomoto Co., Inc.  
Assignee of the entire right, title,  
and interest in and to U.S. Patent  
4,816,484

ADDRESS: 15-1, Kyobashi 1 chome  
Chuo-ku, Tokyo, 104, Japan

Akihide Wakamatsu November 15, 1993  
Signature Date

Akihide Wakamatsu  
Typewritten Name

Deputy General Manager; Pat. & Licensing  
Title Dept.

10-635-0 REISSUE

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

IN RE APPLICATION OF:

SHIGESHI TOYOSHIMA ET AL

U.S. PATENT NO.: 4,816,484

PATENTED: MARCH 28, 1989

SERIAL NO.: 07/146,719

FILED: JANUARY 21, 1988

FOR: HYPOGLYCEMIC AGENT

ASSENT OF ASSIGNEE UNDER 37 CFR § 1.172

HONORABLE COMMISSIONER OF PATENTS & TRADEMARKS  
WASHINGTON, D.C. 20231

SIR:

I, the undersigned representative of Ajinomoto Co., Inc., 15-1 Kyobashi, 1-chome, Chuo-ku, Tokyo, Japan 104, certify that I am an individual empowered to act on behalf of petitioner, Ajinomoto Co., Inc., of 15-1 Kyobashi, 1-chome, Chuo-ku, Tokyo, Japan 104, the assignee of the entire right, title and interest in and to the above-captioned application by virtue of an assignment from the inventors of said application.

I further certify that the Assignment has been recorded in the U.S. Patent and Trademark Office at reel no. 4982, frames 100 and 101, that I have reviewed the Assignment recorded at said reel and frame, and that to the best of my knowledge and belief, title is in the above-noted assignee.

I further declare that Ajinomoto Co., Inc., of 15-1 Kyobashi, 1-chome, Chuo-ku, Tokyo, Japan 104, the assignee of the entire right, title and interest in and to U.S. Patent No.

4,816,484, by assignment recorded at reel 4982, frames 100 and 101, hereby provides its assent for the filing of a Reissue Application for U.S. Patent No. 4,816,484.

I declare further that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of this application or any patent issuing thereon.

FOR:

AJINOMOTO CO., INC.  
Assignee of entire right, title,  
and interest in and to U.S.  
Patent No. 4,816,484

ADDRESS:

15-1 Kyobashi, 1-chome  
Chuo-ku, Tokyo, JAPAN 104

November 15, 1993  
Date

Akihide Wakamatsu November 15, 1993  
Signature Date

Akihide Wakamatsu  
Typewritten Name

Deputy General Manager; Pat. & Licensing  
Title Dept.

SGB/rac